

APPLICANT(S): TRIBELSKY, Zamir et al.
SERIAL NO.: 10/566,983
FILED: February 2, 2006
Page 3

AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows:

1. (Currently Amended) Method for coupling energy in order to change a mechanical and/or chemical property of target molecules or microorganisms, the method comprising [;]:

(a) providing energy having predetermined parameters ~~in terms of power, wavelength, duty cycle and repetition rate, projected from an outlet of~~ by at least one energy source;

(e) providing a stream of liquid having a predetermined flow rate;

(f) directing said stream of liquid to a contact with a destination site;

(g) directing said energy along a trajectory of said stream of liquid;

maintaining said stream on said destination site for a period and under conditions sufficient for altering at least one chemical or mechanical property of at least 50 percent of particular target molecules or of particular microorganism species located between the energy source and the destination site[;].

2. (Currently Amended) Method for coupling energy according to claim 1, comprising periodically replacing wherein a plurality of destination sites ~~are being periodically replaced~~ opposite the stream of the liquid while maintaining the liquid stream ~~is being maintained~~ in contact with each destination site for substantially said period and substantially under said conditions.

3. (Currently Amended) Method for coupling energy according to claim 1[.] comprising moving wherein the stream of the liquid ~~is being moved~~ along a plurality of destination sites while maintaining ~~being maintained~~ the stream of liquid in contact with each destination site for substantially said period and substantially under said conditions.

APPLICANT(S): TRIBELSKY, Zamir et al.

SERIAL NO.: 10/566,983

FILED: February 2, 2006

Page 4

4. (Currently Amended) Method according to claim 1, wherein the destination site is an item or substance suspected as afflicted by noxious biological or chemical species.

5. (Currently Amended) Method according to claim 1, wherein the destination site is comprises a site selected from the group consisting of pre filed containers, filed containers, surfaces, humans, mammals, vehicles, medical instrumentation, conveyors, conveyor belts, foods, fruits, vegetables, and salads.

6. (Currently Amended) Method for coupling energy according to claim 1, wherein the energy is-comprises a sonic vibration energy in the range of between 1 Hz and 1 GHz.

7. (Currently Amended) Method for coupling energy ~~via streaming liquid~~ according to claim 1, wherein the energy is-comprises a light energy radiation having a wavelength of between 1nm and 1,000nm.

8. (Currently Amended) Method according to claim 1, wherein said at least one energy source is-comprises a laser.

9. (Currently Amended) Method according to claim 1, wherein said at least one energy source is-comprises a pulsed laser selected from the group consisting of a 266nm laser, and a 355nm laser.

10. (Currently Amended) Method according to claim 1, wherein ~~at least one energy source is a pulsed 355nm laser~~ the predetermined parameters comprise at least one parameter selected from the group consisting of power, wavelength, duty cycle and repetition rate.

11. (Original) Method for coupling energy according to claim 1, wherein the energy comprises light radiation waves and sonic vibration waves.

APPLICANT(S): TRIBELSKY, Zamir et al.

SERIAL NO.: 10/566,983

FILED: February 2, 2006

Page 5

12. (Original) Method for coupling energy according to claim 1, wherein the liquid stream is non-piped along at least one portion of its path.

13.. (Original) Method for coupling energy according to claim 1, wherein the liquid stream is piped inside a quartz pipe along at least one portion of its path.

14. (Original) Method for coupling energy according to claim 1, wherein the energy comprises sonic vibration waves in a frequency and amplitude useful for removing particles or microorganisms from a destination surface to which they are being attached.

15. (Original) Method for coupling energy according to claim 1, wherein the energy comprises sonic vibration waves in a frequency and amplitude useful for cracking target particles or microorganisms between the energy source and the destination site.

16. (Original) Method for coupling energy according to claim 1, wherein the energy comprises sonic vibration waves in a frequency and amplitude useful for cracking or disintegrating particles or microorganisms between the energy source and the destination site or for removing target particles or microorganisms from a destination surface, and wherein the energy further comprises UV light radiation useful for damaging microorganisms located between the energy source and the destination site.

17. (Original) Method for coupling energy according to claim 1, wherein the energy is pulsed in pulses having amplitude of between 1 watt/cm² and 1Gwat/cm², time duration of between 1atosec and 1 sec, and frequency of between 1Hz and 1Ghz.

18. (Original) Method for coupling energy according to claim 1, wherein the energy is in a CW (continuous waves) form.

19. (Original) Method for coupling energy according to claim 1, wherein the energy is in a form of pulsed waves combined with continuous waves.

APPLICANT(S): TRIBELSKY, Zamir et al.

SERIAL NO.: 10/566,983

FILED: February 2, 2006

Page 6

20. (Currently Amended) Method for coupling energy according to claim 1, wherein the energy is in a form combining pulsed waves and continuous waves, wherein at least one of the pulsed waves and the continuous waves comprises the pulsed waves are of light energy and the continuous waves or of sonic energy or vice versa, or a combination thereof.

21. (Original) Method for coupling energy according to claim 1, wherein the energy is in a form combining pulsed waves from at least two energy sources.

22. (Original) Method for coupling energy according to claim 1, wherein the energy is in a form combining pulsed waves from at least two energy sources differing from each other in their wavelength, PRT, or power level.

23. (Currently Amended) Method for coupling energy according to claim 1, wherein the ~~wherein the~~ energy is in a form combining pulsed waves from at least two energy sources, wherein said energy sources are synchronized to emit energy pulses in correlation.

24. (Currently Amended) Method for coupling energy according to claim 1, wherein the ~~wherein the~~ energy is in a form combining pulsed waves from at least two energy sources, wherein a first energy source is pulsed 266nm laser, another energy source is pulsed 355nm laser, the pulses of which follows within 150nsec the pulses of said first energy source.

25. (Currently Amended) Method for coupling energy ~~via streaming liquid~~ according to claim 1, further comprising ~~the step of~~ monitoring at least a part of the waves of energy on at least one location between the energy source and the destination site.

26. (Currently Amended) Method for coupling energy ~~via streaming liquid~~ according to claim 1, further comprising ~~the step of~~ monitoring at least a part of the waves of energy on at least one location between the energy source and the destination site and using the monitored

APPLICANT(S): TRIBELSKY, Zamir et al.

SERIAL NO.: 10/566,983

FILED: February 2, 2006

Page 7

data for controlling the amplitude, frequency, repetition rate or duration of the energy output of the at least one energy source.

27. (Currently Amended) Method for coupling energy according to claim 1, further comprising the step of monitoring at least a part of the waves of energy on at least one location between the energy source and the destination site and using the monitored data for controlling the amplitude, frequency, repetition rate or duration of the energy output of the at least one energy source, wherein at least one of the monitored waves are of light energy and the controlled energy source is of sonic energy, ~~or vice versa, or both~~.

28. (Original) Method for coupling energy according to claim 1, wherein the energy is coupled for disinfecting.

29. (Original) Method for coupling energy according to claim 1, wherein the energy is coupled for cleaning.

30. (Original) Method for coupling energy according to claim 1, wherein the energy is coupled for disintegrating sediments.

31. (Original) Method for coupling energy according to claim 1, wherein the energy is coupled for triggering a chemical reaction.

32. (Currently Amended) System for coupling energy for use at a destination site, comprising: (a)

a liquid supply;

(b)-at least one liquid launching nozzle in liquid communication with said liquid supply and capable of directing a liquid stream towards a destination site;

(c)-at least one energy generator capable of directing energy into and along a trajectory of the liquid towards the destination; and

APPLICANT(S): TRIBELSKY, Zamir et al.

SERIAL NO.: 10/566,983

FILED: February 2, 2006

Page 8

(d) ~~conveyor or robot~~ a positioning mechanism [[,]] capable of periodically positioning a plurality of destination sites opposite the at least one nozzle, such that each destination site is being maintained opposite the liquid stream for a period sufficient to alter at least one chemical or mechanical property of at least 50 percent of particular target molecules or of particular microorganism species located between the energy source and the destination site~~[[;]]~~.

33. (Original) System for coupling energy according to claim 32, wherein the liquid communication between the liquid supply and the liquid launching nozzle is via at least one quartz pipe.

34. (Original) System for coupling energy according to claim 32, wherein the at least one quartz pipe is in a rolled up pose.